

IDNR PROPOSED REVISIONS TO CHAPTER 135

CHAPTER 135- TECHNICAL STANDARDS AND CORRECTIVE ACTION REQUIREMENTS FOR OWNERS AND OPERATORS OF UNDERGROUND STORAGE TANKS

	IDNR Original Proposed Revisions (12/18/2015)	IDNR Revisions after Stakeholder Meetings (2/9/2016)	IDNR Notes on Proposed Revisions
<i>Definitions</i> 567-135.2(455B) pg.2-13	IDNR adds definitions for ethanol, light nonaqueous-phase liquid (LNAPL), over-excavation, temporary closed tank, training program	<i>IDNR is adding definition for UST Professional</i>	"UST Professional" is an individual licensed by the Iowa Department of Natural Resources under IAC--Chapter 134. The licensing program includes underground storage tank system installation, installation inspection, UST system testing, tank lining, cathodic protection installation/inspection and inspecting for UST system operational compliance. The license issued will list the type of work the individual is licensed to perform.
567-135.3(455B) UST Systems- Design, Construction, Installation, Notification			
<i>Performance Standards for New UST Systems</i> 135.3(1) pg.13-15	IDNR deadline for implementing secondary containment requirements (including tanks, piping, sumps and UDC) was November 28, 2007.		
<i>Upgrading of Existing UST Systems</i> 135.3(2) pg.17	If 10% or more of the tank lining is in need of repair, the tank must be permanently closed.	<i>IDNR rescinds this proposal</i>	<p>The lined only tanks at 41 sites across Iowa are generally smaller, and small tanks have thinner steel than larger tanks, therefore, it takes less time for spot corrosion to perforate a tank.</p> <p>External corrosion is more serious than internal corrosion.</p> <p>There are two sites among the 41 where they are the only tanks remaining tanks in town (Logan and Kiron).</p>

<p>Notification Requirements 135.3(3) pg.19</p>	<p>New owners are responsible for any current and back tank management fees with late fee penalty that have not been previously paid.</p> <p>An owner or operator who brings into use an underground storage tank, shall complete and submit to the department a copy of the registration form provided by the department within 30 days of the final installation inspection required in 134.27(2)"c" by the licensed installation inspector. The owner or operator shall not allow the deposit of any regulated substance into the tank without prior approval of the department or until the tank has been issued a tank registration tag and is covered by an approved financial responsibility mechanism in accordance with 567—Chapter 136. <i>NOTE: Proposed language is not currently in draft regulation for 135.3(3)"c"</i></p> <p>If an owner or operator fails to register an underground storage tank within 30 days of the final installation inspection required in 134.27(2)"c" by the licensed installation inspector, or the owner or operator shall pay an additional \$250 upon registration of the tank. <i>NOTE: Proposed language is not currently in draft regulation for 135.3(3)"k"</i></p>	<p><i>IDNR rescinds the proposal that new owners pay late fees incurred upon by the previous owner.</i></p> <p><i>New owners will remain responsible for current and back tank management fees (\$65 per tank) if they are not paid.</i></p>	<p>The average age of lined tanks with no external protection is 41 years old.</p> <p><u>Active Sites:</u> 45 Tanks Lined Only without CP 383 Lined Tanks with CP</p> <p><u>Temp Closed Sites:</u> 13 Tanks Lined Only 13 Lined Tanks with CP</p> <p>The IDNR explained that the buyer becomes responsible for the current compliance issues at the site and that it was making it clear to owners that late fees are included in that responsibility.</p> <p>Prospective buyers of UST sites do have a duty and responsibility to conduct due diligence before closing on an UST site.</p> <p>IDNR will update the Real Estate Professionals Booklet to better notify new buyers of their responsibility for fees.</p>
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<i>Registration Tags and Annual Management Fee</i> 135.3 (5) pg.20	The \$250 per tank late fee must be paid if the annual tank management fee is not paid by February 15. (Changed from April 1)	<i>IDNR has changed the deadline to March 1 after which the late fee will be enforced.</i>	IDNR will ensure tank management fee forms are mailed out in plenty of time for owners to meet this new deadline.
<i>Previously Unregistered Petroleum Underground Storage Tanks</i> 135.3(6) pg.21	The tank management fee and any late fees shall be paid for past years in which a tank was not registered.		
<i>Delivery Prohibition Process</i> 135.3(8) pg.23	Delivery prohibition may be enforced due to failure to pay annual tank management fee or if tanks have been closed for longer than 3mo. or temporary closure.	<i>IDNR added Delivery Prohibition for owners/operators that fail to complete monthly/annual walkthroughs.</i> <i>Reinstatement will include conducting the monthly and annual walkthroughs with an UST professional and submitting documentation to the IDNR.</i>	
<i>Secondary Containment Requirements for UST System Installations</i> 135.3(9) pg.25	Tanks and piping with secondary containment installed prior to November 29, 2007 with interstitial monitoring must continue to use interstitial monitoring as the primary leak detection system.		

567-135.4 (455B) General Operating Requirements

<i>Spill and Overfill Control</i> 135.4(1) pg.27-29	DNR provides specific steps to take in cases where the CP system is no longer operating and has not operated in the past six months, after six months, and when it hasn't operated for 12 months or more.	<i>See attached changes for CP***</i>	Three-year testing must be conducted by an UST professional. Testing and inspecting of equipment requires years of experience, field-based troubleshooting and certifications from manufacturers. PEI RP900 and RP1200 call for the use of skilled, professional service technicians to conduct annual walkthrough inspections and triennial testing. Inspecting overfill prevention equipment requires removing the overfill device from the tank (e.g., automatic shutoff, ATG probe or ball float).
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Repairs and Replacement 135.4(4) pg.30	Testing is required for repairs to secondary containment areas of tanks and piping used for interstitial monitoring and to containment sumps.		
Reporting and Record Keeping 135.4(5) pg.31	Owners and operators must notify the department of any change in Class A/B/C operators and loss of financial responsibility.	IDNR is not requiring notification of C operator changes.	
Training Required for UST Operators 135.4(6) pg.32	Class C Operators must be retrained ever year. Class A and B operators must take annual refresher training.	IDNR proposes 3 year retraining cycle for A/B operators and annual training for Class C operators.	The department explained that the importance of the Class C operator cannot be overstated in their duties of overseeing the dispensing of flammable and combustible fuels and responding to spills and in some cases emergency conditions. ISU offers free training for Class C operators if cost is a concern. There is also a high turnover among Class C operators, therefore, training must be completed with each new C operator anyway. Remember the Class A/B operator can still train the Class C operators.
UST Operator Training Course Requirements 135.4(8) pg.34	The department will prepare an exam to be used by all training vendors and attendees must pass with 85% correct.		
Periodic Operation and Maintenance Walkthrough Inspections 135.4(12) pg.36-37	Owners and operators with uncontained sumps must visually inspect all dispensers at least once per month for leaks. An inspection log must be kept as part of the site records. If under dispenser containment is present the visual inspection is not required. <i>Currently under 135.5(1) pg. 39</i> <u>Monthly Walkthroughs</u> It is expected that Class A/B operators conduct monthly walkthrough inspections. Class A/B operators were trained for this, and these inspections are vital to the safe and proper	IDNR rescinds its decision to require the annual walkthrough inspection be submitted to the department.	Coordinate the annual walkthrough with your compliance inspection every two years. Have your third-party compliance inspector conduct the walkthrough and provide you with the form to keep with your UST records (the inspection is uploaded by the inspector; the walkthrough must be kept with your records). This way you could complete both requirements in one inspection. 1. Coordinate the annual walkthrough

	<p>operation of the UST system. The inspections should greatly reduce the releases from spill buckets.</p> <p><u>Annual Walkthroughs</u> IDNR recommends that annual walkthrough inspections be conducted by UST professionals. PEI RP900 and RP1200 call for the use of skilled, professional service technicians to conduct annual walkthrough inspections and triennial testing. Walkthrough inspections could be conducted by a third party compliance inspector who can combine the annual and two-year inspections. Annual walkthrough inspections must be conducted on all containment sumps. IDNR proposes the annual walkthroughs be submitted to the department 12 months after the last compliance inspection was done. This helps owners stay consistent with their annual walkthroughs and compliance inspections.</p>		<p>inspection with your service tech or UST professional with routine onsite service such as annual certification and testing (but not within six months of the last annual walkthrough).</p> <ol style="list-style-type: none"> 2. Do your own walkthrough inspection as a Class A/B operator and document it on the PEI or department form. Retain the form at the site for one year. 3. At a minimum, annual walkthrough inspections include the monthly walkthrough inspection plus checking: <ol style="list-style-type: none"> a. Containment sumps b. Handheld release detection equipment <p>The IDNR will have monthly and annual walkthrough inspection example forms ready to view by the next meeting.</p>
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567-135.5(455B) Release Detection

<p><i>General Requirements for all UST Systems</i> 135.5(1) pg.38</p>	<p>When an owner and operator continually show the inability to conduct leak detection with the method being used, the department may require the owner and operator to find an alternative leak detection method. Temporary closure may be required or delivery prohibition enforced if the owner and operator cannot demonstrate compliance with leak detection. If an owner and operator does not consistently conduct leak detection as required, the department may require the owner and operator to contract with a third party to perform leak detection at the site and may require temporary closure until they can demonstrate compliance.</p>		
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567-135.15(455B) Out-of-Service UST Systems and Closure

<p><i>Temporary Closure</i> 135.15(1) pg.85-87</p>	<p>When an UST System is not in compliance with performance standards for new UST Systems it must be permanently closed. The tanks cannot be returned to service.</p> <p>DNR provides specific steps to maintain temporary closure.</p> <p>When an UST system is temporarily closed for more than 12mo the tanks must be permanently closed. (Exceptions; the department may approve an extension if the owner can show the UST System will be returned to service and a site check is conducted)</p>	<p><i>When a tank system is closed for more than twelve months, the owner must permanently close the tank system as required in the State Fire Code [661—221.4(101)] which adopts the International Fire Code (3404.2.13.1.3) by reference as the rules for motor fuel dispensing facilities and repair garages). The department may approve an extension if a variance is obtained from the State Fire Marshal and the site remains in compliance with the department's temporary closure requirements.</i></p>	<p>The International Fire Code states: 3404.2.13.1.3 Out of service for one year. Underground tanks that have been out of service for a period of one year shall be removed from the ground in accordance with Section 3404.2.14 or abandoned in place in accordance with Section 3404.2.13.1.4.</p>
<p><i>Permanent Closure and Changes-in-Service</i> 135.15(2)pg.87 <i>Assessing the Site at Closure or Change-in-Service</i> 135.15(3) pg.88-89</p>	<p>Permanent closure must be conducted by an Iowa licensed remover. Certified Groundwater Professional must oversee sampling.</p> <p>Multiple groundwater monitoring wells may be required for closure.</p> <p>Soil sample requirements for single and double wall piping to be included in department guidance for permanent closure.</p>	<p><i>IDNR's language is acceptable as follows: At some tank and piping closures, a minimum of one monitoring well may not be sufficient to represent a release where it is most likely to be present. An additional groundwater monitoring well or wells may be necessary.</i></p>	

567-135.20 (455B) Compliance Inspection of UST System

<p>135.20(1) pg.95</p>	<p>A compliance inspection shall be conducted within 3-6 months of new UST installation.</p>	<p><i>IDNR rescinds this proposal</i></p>	<p>It is expected that monthly/annual walkthroughs and secondary containment requirements will identify problems with a new UST system.</p>
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*****Attached CP Revisions**

Operation and Maintenance of Corrosion protection [135.4(2)"e."

Current Proposal	Proposed Change
When an impressed current cathodic protection system is not providing cathodic protection for the time periods given below, take the following actions:	<i>No Change</i>
1. <i>Temporary Loss of Power.</i> If there is a loss of power to the rectifier since the last 60-day inspection, no action is required if ampere and voltage readings are at design levels when power is restored.	<i>For impressed current cathodic protection systems that have been inoperative for 0-90 days after failing a corrosion protection test or after discovering the system is not operating, all of the following must be done:</i> <ol style="list-style-type: none"> 1. Power must be restored to an inoperative corrosion protection system. A damaged or failed corrosion protection system must be repaired by a cathodic protection tester. (A corrosion expert must approve any modifications to the system that are outside of the original design.) 2. A cathodic protection tester must test the corrosion protection system.
2. <i>When cathodic protection has not been providing adequate corrosion protection for up to six months.</i> A cathodic protection tester must check the system within 30 days of discovering the system is not functioning. Within 45 days submit the following documentation to the department: <ol style="list-style-type: none"> a. The cathodic protection tester's report of the cathodic protection system and documentation of any repairs. Include the systems design standards; b. The reason for the loss of cathodic protection; c. A copy of the 60 day inspection records (if impressed current) and leak detection records for the past year; d. A copy of the design standards prior to loss of protection; and 	<i>For impressed current corrosion protection systems that have been inoperative or failed a corrosion test and not repaired for 90-365 days after failing a corrosion protection test, all of the following must be done:</i> <ol style="list-style-type: none"> 1. Power must be restored to an inoperative corrosion protection system. 2. The corrosion protection system must be repaired, tested and recommissioned under the supervision of a corrosion expert. 3. A precision test must be conducted on the entire UST system 4. The corrosion protection system must be retested within six months of the repair or power being restored.
3. <i>When cathodic protection has not been providing adequate corrosion protection for six months to a year.</i> <ol style="list-style-type: none"> a. Tightness test the tanks and lines in accordance with 135.5(4)"c" within 14 days of discovery. b. Within 10 days submit to the department the last 	<i>If a UST system has been in operation for the last 365 days, but the impressed current corrosion protection system has been inoperative for more than 365 days or failed a corrosion test and not repaired for more than 365 days, all of the following must be done:</i> <ol style="list-style-type: none"> 1. An internal, manned inspection of the steel tank must be

inspection of the cathodic protection system by a cathodic protection tester, the cathodic protection system's design standards, the past year's monthly leak detection records and the 30 day inspection report of the cathodic protection system (if impressed current),

- c. Within 30 days, provide an explanation to the department in writing why the cathodic protection system was not providing protection. Include why the system malfunction was not discovered during the required 60-day inspection of amperage and voltage readings.
- d. A corrosion expert must certify the tank system is still suitable for corrosion protection. Documentation must be submitted to the department of corrosion expert's inspection, repair and re-certification of the cathodic protection system.
- e. If determined the tank is not suitable for corrosion protection, the tank must be permanently closed in accordance with 135.15.

4. *When cathodic protection was not functioning for twelve months or more.*
 - a. Immediately empty and stop using the tank system.
 - b. Steel product lines must be permanently closed.
 - c. The age of the tank must be within the manufacturer's warranty and currently meet tank standards for corrosion protection at the time of installation in order to be brought back into use. A tank not meeting these criteria must be permanently closed.
 - d. The owner may submit a request for allowing a tank back into use if it meets the requirements in subparagraph (3). The request must include test and evaluation procedures the owner plans to follow to ensure tank integrity for re-establishing cathodic protection.
 - e. At a minimum, the tank system must pass system

conducted according to a national standard (e.g., API 1631). If the UST fails the internal inspection, the UST owner must permanently close the tank in accordance 567—135.15(2) and the UST Section Removal Guidance.

2. All metal piping and buried metal components (e.g., flex connectors, couplings) that routinely contain product must be inspected by a UST professional or cathodic protection tester. If the metallic components have no visible corrosion and have passed a line tightness test (unless the piping is exempt from leak detection, e.g., Safe or European Suction) then the cathodic protection system may be repaired or replaced under the supervision of a corrosion expert. Metallic components that show visible corrosion must be replaced.
3. A precision test must be conducted on the entire UST system following repair or replacement.
4. The corrosion protection system must be retested within 6 months of repair.

If a UST system has been out of service for the last 365 days or the impressed current corrosion protection system has been inoperative or failed a corrosion test and not repaired for more than 365 days, the UST system must be permanently closed in accordance with 135.15(2) and the UST Section Removal Guidance.

tightness tests, have an internal inspection to determine structural condition of the steel tank, and have the cathodic protection system inspected by a corrosion expert. A corrosion expert must certify the integrity of the tank system in order to re-establish cathodic protection and allow continued use of the tank system.

- f. Following approval of the test and evaluation procedures, submit to the department all tests performed on the tank system and the report from the corrosion expert. Copies of the last 2 inspections by a cathodic protection tester and the past year's 30-day inspection log should be included.
- g. If the tank is unable or will not be brought back into immediate use, the tank system must be permanently closed in accordance with 135.15(455B).

The IDNR agrees that the owners and operators need more time to complete the first cycle of 3 year testing.

This will be discussed as the next Stakeholder meeting.

Federal Regulation to be Implemented	Proposed Date of Implementation
Flow restrictors in vent lines	Immediate upon adoption
Testing following a repair	Immediate upon adoption
Closure of internally lined tanks that fail periodic inspection	Immediate upon adoption
Demonstrating compatibility	Implemented upon adoption
Airport hydrant fuel systems and field constructed tanks	Owners and operators must begin meeting these requirements by October 13, 2018
Secondary containment and interstitial monitoring	Implemented
UDCs for new dispensers—implemented	Immediate upon adoption
Operator training	Immediate upon adoption
Site assessment records for groundwater and vapor monitoring	Immediate upon adoption
Previously deferred UST systems (emergency generators, airport hydrant fuel systems and field constructed tanks)	Immediate for emergency generators October 13, 2018 for airport hydrant fuel systems and field constructed tanks
Spill prevention equipment testing	Owners and operators must conduct the first test or inspection by October 13, 2018
Overfill prevention equipment inspections	
Containment sump testing for sumps used for piping interstitial monitoring	
Release detection equipment testing	
Walkthrough inspections	Immediate upon adoption

Revisions of LUST Assessment and Remediation

Citation	Proposed Revisions	Revision Purpose
<i>Free Product Assessment and Removal</i> 135.7(5) pg.50	<p>Added: “d”(11) “Identification of all water lines, regardless of construction material, within the area of free product. A water line shall be considered within the area of free product if it is located within the boundary of the free product plume as defined by wells unless it can be demonstrated that no LNAPL exists within 10 feet (horizontally or vertically) of the water line and the LNAPL is not migrating nor is likely to migrate. Water lines within the area of free product must be relocated unless there is no other option and the department has approved an alternate plan of construction. See 135.12(3) “c”.”</p> <p>Inserts highlighted sections to “f”：“....”When free product activities have been terminated, owners and operators must inspect the monitoring wells monthly for at least a year unless another schedule is approved by the department. The department must be notified and can require free product recovery activities be reinitiated if during the monthly well inspections it is determined the product thickness in a monitoring well exceeds 0.02 foot”....</p>	<p>Revised to include language regarding identifying and managing water lines located in an area of free product, previously found only in 135.12(3)c, to the requirements for the Free Product Recovery Assessment Report. Adds option language for groundwater professional to document greater than 10 feet of separation between the LNAPL and the water line.</p> <p>Adds additional discretion to the department for deciding when free product recovery may be terminated at a site. The current language is very specific “one size fits all” language.</p>
<i>Chemicals of concern</i> 135.8(3) pg.51 <i>Group two chemicals</i> 135.10(2)m pg.63	<p>Delete last sentence in (3): “At Tier 2 and Tier 3, owners and operators have the option of analyzing for these specific constituents and applying them to the specific target levels in Appendices A and B instead of using the TEH conversion method if an approved laboratory and laboratory technique are used”.</p> <p>Delete“m: “<i>Group two chemicals</i>. At Tier 2, chemical-specific values for the four chemicals may be used or the largest of the four TEH default values. (Refer to Appendix B and department Tier 2 guidance for using the TEH conversion method for modeling.) If chemical-specific values are used, the analytical method must be approved by the department prior to its use.”</p>	<p>Removes the option for Owner/Operator to sample for specific constituents and apply the site specific target levels in Appendix A & B. This option has not been used over the years likely due to the analytical costs and difficulty in meeting the low detection limits for the constituents.</p> <p>For Tier 2, this also required the cumbersome procedure of converting the single constituent results back to total extractable hydrocarbons values to compete the Tier 2 modeling.</p>
<i>Source Width</i> 135.10(2)f(3) pg.62	Delete (3) “Estimating source width when free product is present. Groundwater from wells with free product must be analyzed for BTEX and the source width and source length are	Removes language allowing free product plume source width to be used in Tier 2 modeling.

	<p>estimated using the criteria in 135.10(2)f(1) and 135.10(2)“f”(2) above. For those sites with approved site cleanup reports and free product present in wells but actual BTEX values are not available, source width and source length may be estimated in accordance with 135.10(2)“f”(1) and 135.10(2)“f”(2) using the default BTEX values for groundwater in 135.18(4) or estimated by using the area representing half the distance between wells with free product and wells without free product, whichever method is greater.”</p>	
<p>Bedrock Assessment 135.10(3)a(2) pg.64</p>	<p>Adds sentence: “If soil contamination above a Tier 1 level is not identified or an over-excavation of contaminated soil has successfully removed all soil contamination greater than a Tier 1 level, then monitoring wells can be installed in the source area and the site can be evaluated as exempt granular bedrock.”</p>	<p>Adds option of installing monitoring wells in the source area at granular bedrock site if soil contamination is not present or has been removed and then evaluating the site as exempt granular bedrock.</p>
<p>Bedrock Assessment 135.10(3)m(1) pg.67</p>	<p>Adds sentence: “If soil contamination above a Tier 1 level is not identified or if an over-excavation of contaminated soil has successfully removed all soil contamination greater than a Tier 1 level and monitoring wells are installed in the source area, exit monitoring criteria may be met by two consecutive samples collected at least six months apart; and concentrations in all monitoring wells must be less than the lowest target level.”</p>	<p>Adds option of installing monitoring wells (MWs) in the source area at a nongranular bedrock site if soil contamination is not present or has been removed. By doing so exit monitoring criteria may be met by two consecutive sampling events separated by at least 6 months with concentrations below target levels in all site MWs versus 3 consecutive annual sampling events with concentrations below target levels in all site MWs.</p>
<p>Modeling 135.10(4)e pg.67</p>	<p>Highlighted phrase inserted: “At Tier 2, the groundwater well located within the modeled plume is assumed to be drawing from the contaminated aquifer, and the groundwater transport model is designed to predict horizontal movement to the well. If the groundwater professional <u>or the department</u> determines that assessment of the vertical movement of contamination is advisable to determine the potential or actual impact to the well source, a Tier 3 assessment of this vertical pathway may be conducted.”</p>	<p>Adds “or the department” to language regarding when, during the groundwater ingestion pathway assessment, it is determined that assessment of the vertical movement of contamination is advisable for evaluating the potential or actual impact to the well source</p>
<p>Analyzing for methyl tertiary-butyl ether (MTBE) (2) Required MTBE testing. 135.19 pg.95</p>	<p><i>Proposed Text:</i> “Water samples must be analyzed for MTBE when collected for risk-based corrective action as required in rules 567—135.8(455B) through 567—135.12(455B). These sampling requirements include but are not limited to Tier 2 and Tier 3 assessments where groundwater ingestion pathway evaluation and subsequent monitoring is required.”</p>	<p>Limits the requirement for MTBE analysis to groundwater samples collected for Tier 2 or Tier 3 assessments where groundwater ingestion pathway evaluation and subsequent monitoring is required.</p>

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